

What is claimed is:

1 1. A miniature differential microphone, comprising:

2 at least a pair of substantially rigid diaphragm
3 segments each having two opposing surfaces and two
4 opposing edges, said opposing edges being substantially
5 parallel to one another, at least one of said two
6 opposing edges of each of said at least a pair of
7 diaphragm segments defining a hinge edge, each of said at
8 least a pair of diaphragm segments being disposed
9 adjacent one another with one of said at least one hinge
10 edge thereof being aligned proximate and substantially
11 parallel to said at least one hinge edge of another of
12 said at least a pair of diaphragm segments;

13 a first hinge fixedly attached to each adjacent one
14 of said at least one hinge edge of each adjacent pair of
15 said at least a pair of diaphragm segments disposed to
16 flexibly join adjacent ones of said at least one hinge
17 edges;

18 a second hinge located beneath a lower one of said
19 two opposing faces and positioned substantially centrally
20 thereupon and substantially parallel to each of said two
21 hinge edges.

1 2. The miniature differential microphone as recited in
2 claim 1, wherein said at least two diaphragm segments are
3 substantially identical to one another.

1 3. The miniature differential microphone as recited in
2 claim 1, wherein each of said at least two diaphragm segments
3 are dimensioned in the range of approximately 1 mm x 2 mm and
4 each have a thickness in the range of approximately 2 •m.

1 4. The miniature differential microphone as recited in
2 claim 1, wherein each of said at least two diaphragm segments
3 comprise polycrystalline silicon.

1 5. The miniature differential microphone as recited in
2 claim 4, wherein each of said at least two diaphragm segments
3 are constructed using silicon microfabrication techniques.